
Cal Poly Pomona and Cal State LA Collaborative CIRM Bridges Program to Enhance Stem Cell Research Training and Education

Grant Award Details

Cal Poly Pomona and Cal State LA Collaborative CIRM Bridges Program to Enhance Stem Cell Research Training and Education

Grant Type: Bridges

Grant Number: TB1-01176

Project Objective: The purpose of the Bridges program is to provide comprehensive training and full-time research internships for qualified students and to give other students a basic understanding of stem cell research through development of an appropriate curriculum.

Investigator:

Name:	Jill Adler-Moore
Institution:	Cal Poly Pomona
Type:	PI

Award Value: \$3,056,191

Status: Closed

Grant Application Details

Application Title: Collaborative CIRM Bridges Program to Enhance Stem Cell Research Training and Education

Public Abstract:

Two Bacchalaureate/Masters (BS/MS) universities will collaborate in the development of a quality stem cell education program. Stem cell research has the potential for changing medical practice and improving health care. To help achieve this and maintain government and public support for stem cell research, stem cell education needs to be accessible to all university students, since some students will become an integral part of the stem cell workforce and many others will make up the large body of future governing officials and voting voices. The program goals will be 1) to provide comprehensive stem cell training and research opportunities for qualified students and 2) to give our large, ethnically diverse student populations, a basic understanding of stem cell research. The program will provide stem cell research internships for qualified BS and MS students. Curriculum will be developed to introduce the concepts and promises of stem cell research into both life science major and non-major courses. To impact the larger student population, a 1-2 hour module in both conventional and online formats for the Introductory Biology courses will be developed. Ten students/year (3 BS, and 2 MS, from each campus) will be selected for the stem cell internships (6 months for BS, 12 months for MS) in one of several research-intensive host institutions. Prospective students will take upper division courses to obtain 1) an understanding of the principles of molecular and cellular biology, 2) familiarity with molecular manipulation techniques, and 3) experience with basic cell culture techniques. Following their acceptance as interns, students can elect to take a 10-week Stem Cell Biology lecture/laboratory course at one of the BS/MS universities. This course will be taught by a stem cell biologist and will give the students a better understanding of stem cell research. All interns will also participate in a 1-week Stem Cell Techniques Training course at a CIRM Shared Research Laboratory prior to starting their internships. Upon completion of their internships, students will give talks on their research to the campus communities. There will also be two guest stem cell seminars/Quarter to give other faculty and students the opportunity to become familiar with ongoing stem cell research. We anticipate that students completing this program will be highly trained in stem cell research and ready to enter the stem cell workforce or to continue with their stem cell education as part of an advanced degree. The two BS/MS universities will pool faculty expertise and years of experience in curriculum development, student mentoring, research training and career guidance to provide outstanding opportunities for the students to learn more about stem cells. With our large student populations, including many under-represented minority students, we will be able to develop a successful program to help advance stem cell research in California.

Statement of Benefit to California:

Stem cell research has the potential to improve the health care of all Californians. To achieve this goal and maintain state government and public support in California for stem cell research, stem cell education needs to be made accessible to all California university students since some of them will become part of the stem cell workforce and many others will make up the large body of future governing officials and voting voices of California. Two Bacchalaureate/Master's degree universities will collaborate in the development of a stem cell program to do this. To prepare students to enter the California stem cell workforce, we will provide research internship opportunities at major research-intensive institutions for qualified undergraduate and Master's degree students. Since our large pool of candidates includes many under-represented minority students, the program will make a significant contribution to the training and diversity of California's future stem cell research workforce. To give the large, ethnically diverse California student population a basic understanding of stem cell research, stem cell curriculum for both life science majors and non-majors will also be developed. An online stem cell module will be included in the curriculum development to ensure dissemination of the program to the wider population. By including a large number of students in our program, we hope to enhance the general public's awareness of the continuing progress in stem cell research and therefore help the public in their future decision-making on supporting stem cell research.